

WHAT IS CLAIMED IS:

1. A method for recovering hydrogen chloride from chlorine based waste which comprises adding water and a reducing agent to an acid gas obtained by the combustion of chlorine based waste to effect reaction to obtain a crude hydrogen chloride aqueous solution having an oxidation-reduction potential of not higher than 900 mV and then, distilling the crude hydrogen chloride aqueous solution to obtain a purified hydrogen chloride gas.
2. The method for recovering hydrogen chloride from chlorine based waste of claim 1, wherein an oxidation-reduction potential automatic control means for measuring the oxidation-reduction potential of the crude hydrogen chloride aqueous solution and automatically controlling the amount of the reducing agent is used to control the oxidation-reduction potential not higher than 900 mV.
3. The method for recovering hydrogen chloride from chlorine based waste of claim 1, wherein the oxidation-reduction potential of the crude hydrogen chloride aqueous solution is 600 to 850 mV.
4. The method for recovering hydrogen chloride from chlorine based waste of claim 1, wherein before addition of the reducing agent, the acid gas is contacted with water.
5. The method for recovering hydrogen chloride from chlorine based waste of claim 1, wherein after addition of the reducing agent to the acid gas, water is added.
6. The method for recovering hydrogen chloride from chlorine based waste of claim 1, wherein a reducing agent-containing aqueous solution is added to the acid gas.
7. The method for recovering hydrogen chloride from chlorine based waste of claim 1, wherein the reducing agent is a sulfur based compound and/or a nitrogen based compound.
8. The method for recovering hydrogen chloride from chlorine based waste of claim 1, comprising cooling the obtained purified chlorine gas, and removing moisture from it by an eliminator.
9. The method for recovering hydrogen chloride from chlorine based waste of claim 8, further comprising

09842136-042601

compressing the purified hydrogen chloride gas after removal of moisture to obtain a pressurized hydrogen chloride gas or a liquefied hydrogen chloride gas.

10. The method for recovering hydrogen chloride from chlorine based waste of claim 1, comprising contacting the purified hydrogen chloride gas with water to obtain a purified hydrogen chloride aqueous solution.

11. Use of the hydrogen chloride to be recovered by the method of claim 1 as the oxychlorination feedstock in producing a vinyl chloride monomer.

12. A method for recovering hydrogen chloride from chlorine based waste which comprises adding water and a reducing agent to an gas obtained by the combustion of chlorine based waste to effect reaction to obtain a crude hydrogen chloride aqueous solution having an oxidation-reduction potential of 600 to 850 mV by using an oxidation-reduction potential automatic control means for measuring the oxidation-reduction potential of the crude hydrogen chloride aqueous solution and automatically controlling the amount of the reducing agent and then, pressure distilling the crude hydrogen chloride aqueous solution to obtain an purified hydrogen chloride gas.

09842136 042601